UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
DAILEY, THOMAS J

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *21 February 2008*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-7,9 and 11-39* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-7, 9, and 11-39* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
       1. ☐ Certified copies of the priority documents have been received.
       2. ☐ Certified copies of the priority documents have been received in Application No. _____.
       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7, 9, and 11-39 are pending.

Response to Arguments

2. The U.S.C. 112 second paragraph rejections directed at claims 14-16 have been withdrawn in light of the entered amendments.

3. Applicant's arguments filed February 21, 2008 have been fully considered but they are not persuasive.

4. The applicant argues, with respect to claims 1, 12, 19, 29, and 39, that one of ordinary skill in the art would not have been motivated to combine the teachings of Aubault (US Pub. No. 2005/0086318) and Bereznyi (US Pat. 6,449,695). Further, the applicant contends that the examiner fails to provide a sufficient reason for the combination of Aubault and Bereznyi.

5. The examiner disagrees. The combination of Aubault, Deo, and Bereznyi would have been obvious because both Aubault and Deo teach methods of memory management, and it would have been obvious to one of ordinary skill in the art to try Bereznyi's expiration times as a method to manage memory, in an attempt to provide a more robust and effective memory management system, as a person of with ordinary skill has good reason to pursue known options within his or her

technical grasp; the resultant combination (i.e., the claimed invention), therefore, would have resulted not of innovation but of ordinary skill and common sense.

6. The applicant further argues, with respect to claims 1, 12, 19, 29, and 39, that Aubault and Deo (US Pat. 6,449,695) do not teach an apparatus receiving, from a remote terminal, a status of content stored in memory of the terminal, and sending one or more instructions to the terminal to thereby control storage of content in memory of the terminal. Additionally, the applicant argues there is no apparent reason for the alleged combination of Aubault and Deo.

7. The examiner disagrees. Firstly, the applicant is arguing language that is more narrow than the claim language of claim 12 (claim 12 recites, "the processor is configured to receive one or more instructions form the network entity based upon the status and the associated parameters to at least partially control storage of the at least one piece of content in memory of the terminal") and the claim as currently recited is rejected below. Secondly, the examiner motivation for one of ordinary skill in the art to combine Aubault and Deo was to decrease the processing burden of a terminal that has less processing power available than a computer it is networked with (Deo, column 2, line 65-column 3, line 4). That is to say, in order to conserve the processing power of a terminal with less processing power than a computer it is networked with it will allow said processing power to be used for operations other than memory management

operations and such a method would also increase the overall the speed of

memory management operations of the system (i.e. since there will be less time

spent waiting by the user because a faster processor will handle management

functions). Thus one of ordinary skill in the art would be motivated to use Deo's

method in combination with Aubault, thereby yielding the claimed invention.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-7, 9, and 11-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aubault (US Pub. No. 2005/0056318) and Deo et al. (US Pat.

6,157,982), hereafter "Deo," in further view of Bereznyi et al. (US Pat.

6,449,695), hereafter "Bereznyi."

10. As to claim 12, Aubault discloses an apparatus comprising:

a processor operable within a terminal and configured to:

send, to a network entity located remote from the terminal, a status of at

least one piece of content stored in memory of the terminal ([0131], client

(terminal) transmits cache information to server (network entity)), each piece

of content being associated with parameters including a and a deletion priority

value ([0076]-[0077], relevance criterion reads on "a deletion priority value", in

that the object with the lowest relevance criterion will be the first to be

deleted),

receive one or more instructions based upon the status and the

associated parameters to at least partially control storage of the at least one

piece of content in memory of the terminal ([0074]-[0077], client (terminal)

receives new object and it is stored or discarded (controlled) based upon

relevance criterion).

But, Aubault does not explicitly disclose receiving the one or more

instructions at the processor from the network entity. Rather, explicit

instructions for managing the client's memory is given by the client, and not

remotely.

However, Deo discloses receiving one or more instructions at a processor

from a remote network entity based upon the status of the content stored in

memory to at least partially control storage of the at least one piece of content

in memory of the terminal (column 3, lines 16-24, a computer (network entity)

remotely issues memory transactions (instructions) to a information device,

those instructions being based upon the content of the information device's

memory).

Therefore it would have been obvious to one of ordinary skill in the art at

the time of the invention to combine the teachings of Aubault and Deo in

order to decrease the processing burden of a terminal that has less

processing power available than a computer it is networked with (Deo,

column 2, line 65-column 3, line 4).

Further, Aubault and Deo do not explicitly disclose where the content

being additionally associated with a client expiration time and the storage of

the content being based upon such.

However, Bereznyi discloses content being additionally associated with a

client expiration time and the storage of the content being based upon such

(Fig. 6, labels 216 and 218 and column 11, lines 44-51).

Therefore it would have been obvious to one of ordinary skill in the art at

the time of the invention to combine the teachings of Aubault and Deo with

Bereznyi in order to give Aubault and Deo's combined system more flexibility

in how it manages the terminal's memory.

Further, because Aubault and Deo teaches methods of memory

management, it would have been obvious to one of ordinary skill in the art to

try Bereznyi's expiration times as a method to manage memory, as a person

of with ordinary skill has good reason to pursue known options within his or
her technical grasp.

11. As to claims 1, 19, 29, and 39, they are rejected by the same rationale set forth in
claim 12's rejection.

12. As to claims 2, 13, 20 and 30, Aubault, Deo, and Bereznyi disclose the invention
substantially with regard to the parent claims 1, 12, 19, and 29, and further
disclose the processor is configured to receive one or more instructions to delete
at least one piece of content based upon the deletion priority value of each piece
of content stored in memory (Aubault, [0076]-[0078], relevance criterion reads on
"a deletion priority value", in that the object with the lowest relevance criterion will
be the first to be deleted), the processor being configured to receive the one or
more instructions if, based on a determination if memory has sufficient storage
capacity for at least one subsequent piece of content, the memory does not have
(Aubault, [0075]), and the memory does not have sufficient storage capacity
(Aubault, [0076]),.

13. As to claim 3, Aubault, Deo, and Bereznyi disclose the invention substantially
with regard to the parent claim 2, and further disclose determining at least one
piece of content having an exceeded client expiration time (Bereznyi, Fig. 6, label
218 and column 11, lines 44-51), identifying a piece of content having a highest

deletion priority value (Aubault, [0076]) from the at least one piece of content

having an exceeded client expiration time, and send one or more instructions

instructing the terminal to delete the identified piece of content (Bereznyi, Fig. 6,

label 222 and Aubault, [0077]).

14. As to claims 4, 23, and 33, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claim 3, 22, 32, and further disclose the

process is configured to repeatedly identify a piece of content, and send one or

more instructions to instruct the terminal to delete the identified piece of content

(Bereznyi, Fig. 6, labels 216, 218, and 222 and this is done repeatedly by the fact

that the after label 222, the flow chart progresses to Fig. 7, which in turn returns

to right before label 204 of Fig. 6), until one of memory of the terminal has

sufficient storage capacity for the at least one subsequent piece of content

(Bereznyi, column 11, lines 33-37), or each piece of content having an exceeded

client expiration time has been identified and deleted (Bereznyi, column 11, lines

44-51).

15. As to claims 5 and 16, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claims 4 and 15, and further disclose when

memory of the terminal does not have sufficient storage capacity for at least one

subsequent piece of content and each piece of content having an exceeded

client expiration time has been identified and deleted (see claim 4 rejection), the

processor is further configured to identify at least one piece of content having a highest deletion priority value from at least one piece of content remaining in memory of the terminal, and send one or more instructions instructing the terminal to delete the identified at least one piece of content (Aubault, [0074]-[0077]).

16. As to claim 6, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 1, and further disclose the apparatus configured to store at least one piece of content, wherein the parameters further include a server expiration time (Bereznyi, column 11, lines 44-51 and Fig. 6, label 218), and wherein the processor is configured to send at least one piece of content to the terminal (Bereznyi, column 3, lines 56-66).

17. As to claim 7, Aubault, Deo, and Bereznyi disclose the invention substantially with regard to the parent claim 6, and further disclose the processor is further configured to monitor the server expiration time of the at least one piece of content in memory of the apparatus to determine if at least one piece of content has an exceeded server expiration time (Bereznyi, Fig. 6, label 218), and if at least one piece of content has an exceeded server expiration time, delete the at least one piece of content having an expired server expiration time (Bereznyi, Fig. 6, label 222).

18. As to claims 9, 17, 26, and 36, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claims 1, 12, 19, 29, and further disclose

the controller is configured to associate each piece of content stored in the

memory is associated with respective parameter (Aubault, [0076] and Bereznyi,

column 11, lines 44-51).

19. As to claims 18, 27, and 37, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claims 9, 17, 26, and 36, and further

disclose the controller is configured set a deletion priority value for at least one

piece of content (Aubault, [0079]).

20. As to claim 11, Aubault, Deo, and Bereznyi disclose the invention substantially

with regard to the parent claim 9, and further disclose the processor is configured

to associate each piece of content stored in memory of the terminal with

respective parameters (Aubault, [0046] and Bereznyi, column 11, lines 44-51).

21. As to claims 14, 21, and 31, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claims 13, 20, and 30, and further disclose

the processor is configured to send a status of the at least one piece of content

(Aubault, [0054]), to enable the network entity to determine if at least one piece

of content has an exceeded client expiration time (Bereznyi, Fig. 6, labels 216

and 218 and column 11, lines 44-51), and wherein, when the network entity

determines a plurality of pieces of content have an exceeded client expiration

time (Bereznyi, Fig. 6, labels 216 and 218 and column 11, lines 44-51), the

processor configured to receive one or more instructions to delete a piece of

content having a highest deletion priority value from the respective plurality of

pieces of content (Aubault, [0077]) and Bereznyi, Fig. 6, label 222).

Given the explicit teachings of Aubault (the use of a deletion priority value in

order to control the contents of a cache) and Bereznyi (the use of expiration

times in order to control the contents of a cache) one of ordinary skill in the art

would view it as obvious to try using the two methods in concert, i.e. from a

subset of objects have an exceeded expiration time, deleting first those that have

a high deletion priority value, as a person with ordinary skill has good reason to

pursue the known options within his or her technical grasp. Using multiple

parameters to determine whether or not to delete items in a cache is within the

technical grasp of one of ordinary skill in the art.

22. As to claims 15, 22, and 32, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claims 14, 21, and 31, and further disclose

when the network entity determines a plurality of pieces of content have an

exceeded client expiration time, the processor is configured to repeatedly receive

one or more instructions to delete a piece of content having a highest deletion

priority value (Aubault, [0074]-[0077]) from the respective plurality of pieces of

content until one of memory of the terminal has sufficient storage capacity for the

at least one subsequent piece of content, or each the respective plurality of

pieces of content has been identified and deleted (Bereznyi, Fig. 6, labels 216,

218, and 222 and this is done repeatedly by the fact that the after label 222, the

flow chart progresses to Fig. 7, which in turn returns to right before label 204 of

Fig. 6).

23. As to claims 24 and 34, Aubault, Deo, and Bereznyi disclose the invention

    substantially with regard to the parent claim 19 and 30, and further disclose

    receiving at least one piece of content at the network entity (Aubault, [0032]); and

    sending at least one piece of content to the terminal such that the terminal

    receives, and thereafter stores, the at least one piece of content (Aubault,

    [0032]).

24. As to claims 25 and 35, Aubault, Deo, and Bereznyi disclose the invention

    substantially with regard to the parent claim 24 and 34, and further disclose the

    parameters further includes include a server expiration time (Bereznyi, column

    11, lines 44-51), and wherein the method further comprises:

        monitoring the server expiration time of the at least one piece of content in

    memory of the network entity to determine if at least one piece of content has an

    exceeded server expiration time (Bereznyi, Fig. 6, label 218); and

if at least one piece of content has an exceeded server expiration time,

deleting the at least one piece of content having an expired server expiration time

(Bereznyi, Fig. 6, label 222).

Given the explicit teachings of Aubault (a client cache, on the client side, and

a server's object list, on the server side, with the same content) and Bereznyi

(the use of expiration times in order to control the contents of a cache) one of

ordinary skill in the art would view it as obvious to try using both a client

expiration time and a server expiration time as a person with ordinary skill has

good reason to pursue the known options within his or her technical grasp. That

is, a system with multiple entities may need an expiration time for each entity.

25. As to claims 28 and 38, Aubault, Deo, and Bereznyi disclose the invention

substantially with regard to the parent claim 26 and 37, and further disclose

associating each piece of content comprises associating each piece of content

stored in memory of the terminal with respective parameters at the network entity

(Aubault, [0033], the server (network entity) stores the list of objects (content)

and their associated statuses [0040] of the cache (memory) of the client

(terminal) with Deo, column 3, lines 8-25, disclosing remote management of

memory in a terminal).

Conclusion

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

27. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.

29. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

/T. J. D./
Examiner, Art Unit 2152

/Jeffrey Pwu/
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